

A remarkably small new species of *Filistata* (Aranei: Filistatidae) from Portugal

Необычно мелкий новый вид *Filistata* (Aranei: Filistatidae) из Португалии

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КЛЮЧЕВЫЕ СЛОВА: Araneae, пауки, Средиземноморье, Иберийский полуостров.

ABSTRACT. A new species, *Filistata pygmaea* sp.n., is described based on both sexes from Portugal. It is the smallest species among all *Filistata* known from the Mediterranean and Iran. Comparative figures of the vulva of all *Filistata* species occurring west of Afghanistan are provided.

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РЕЗЮМЕ. Описан новый вид *Filistata pygmaea* sp.n. по самцу и самке из Португалии. Это самый мелкий среди всех видов этого рода, известных из Средиземноморья и Ирана. В работе приведены иллюстрации эндогин всех видов *Filistata*, известных к западу от Афганистана.

Introduction

Filistata Latreille, 1810 is one of the largest genera in the family, and excluding *nomina dubia*, it comprises 20 species distributed chiefly in the south of the Palaearctic [World Spider Catalog, 2017]. The Mediterranean congeners were studied by Brignoli [1982], Wunderlich [1992, 1995], Marusik & Zonstein [2014], Marusik & Zamani [2015] and this region was considered to comprise nine species [World Spider Catalog 2017]. *Filistata* presents a relatively long clypeus lacking a bunch of the reclined setae, the labium is longer than wide, the male palpal tibia is not swollen, and the cymbium bears a characteristic set of long prolateral bristles that extend to form a kind of a brush (the members of the related and similarly small-sized fil-

istatine genus *Zaitunia* Lehtinen, 1967 possess a shorter clypeus with a bunch of setae, a labium that is wider than long, a swollen male palpal tibia, and a cymbium lacking prolateral setae — see Zonstein & Marusik [2012]). Here we describe a new species based on a couple recently collected from Portugal; the better preserved female is chosen as the holotype.

Material and methods

Photographs of live specimens were taken using a Canon EOS 400D camera with a Sigma 105 mm/1:2.8 Macro objective. Light micrograph were prepared using an Olympus E-520 camera mounted on an Olympus SZX16 stereomicroscope and the extended focal range images were composed with the CombineZP software. Measurements were made to an accuracy of 0.01 mm. All measurements are given in millimetres. The following abbreviations were used in the text: ALE — anterior lateral eyes; AME — anterior median eyes; Fe — femur; Mt — metatarsus; PLE — posterior lateral eyes; PME — posterior median eyes; Pt — patella; T — tarsus; Ti — tibia.

Types will be deposited in Senckenberg Museum, Frankfurt am Main (SMF).

Taxonomy

Filistata pygmaea sp.n.

Figs 1–9.

TYPES: Holotype ♀ (SMF), PORTUGAL: Algarve Region, remnants of the palaeodune field (37°02.59'N, 8°57.22'W) in the subcoastal zone 3 km NNW Sagres, 27.04.2012, A. Grabolle. Paratype: 1 ♂ (SMF), same data as holotype.



Figs. 1–3. Live specimens of *Filistata pygmaea* sp.n. 1 — holotype female; 2 — paratype male; 3 — holotype female (above) and paratype male (below).

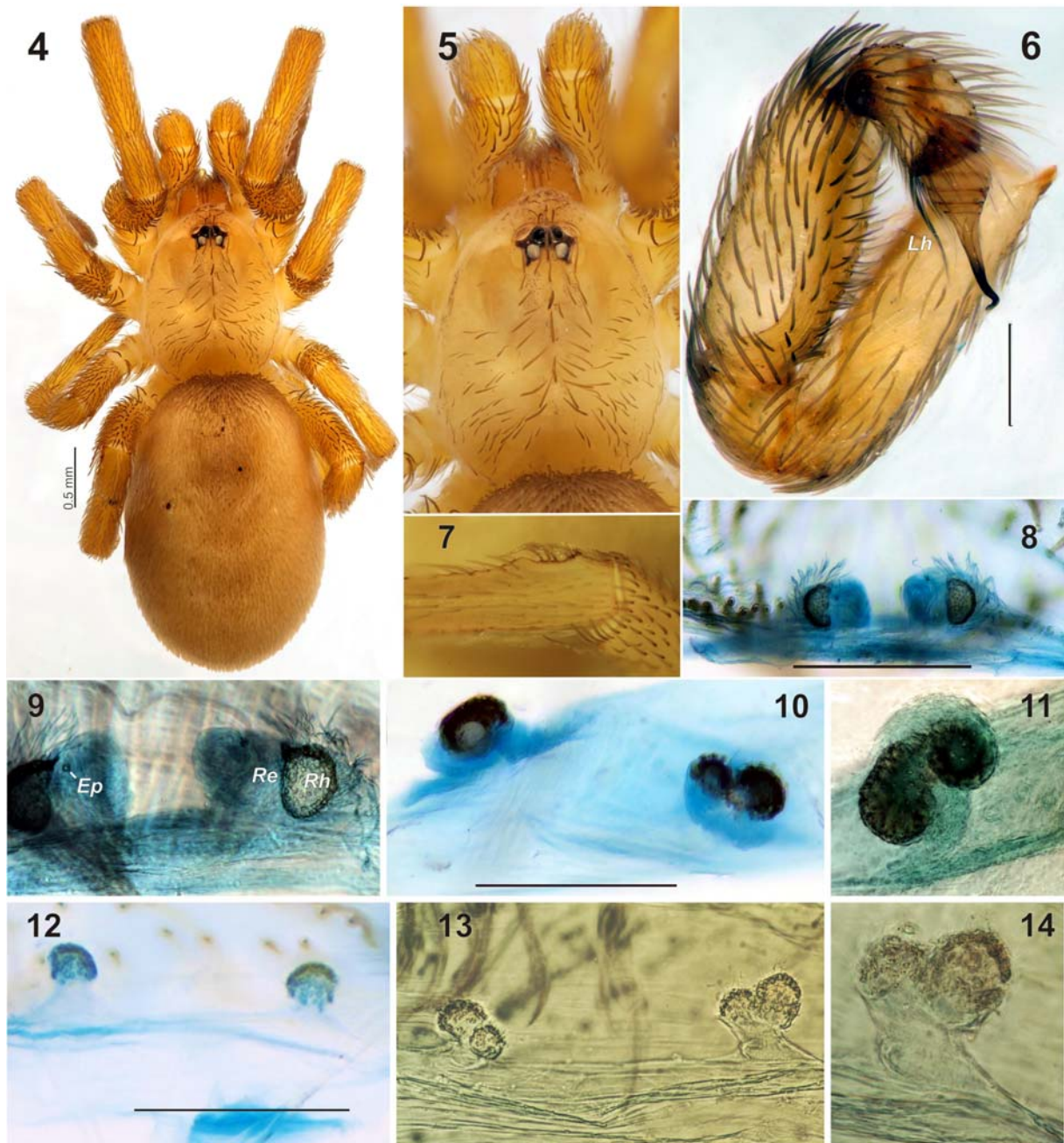
Рис. 1–3. Натурные фотографии *Filistata pygmaea* sp.n. 1 — голотип, самка; 2 — паратип, самец; 3 — самка (сверху) и самец (снизу).

ETYMOLOGY. The specific epithet is derived from the Latin adjective *pygmaeus* meaning “dwarf, pygmy” that corresponds to the very small body size of this species.

DIAGNOSIS. *Filistata pygmaea* sp.n. differs from all known congeners except *F. teideensis* Wunderlich, 1992 from Canary Isles by the near absence of the thoracic fovea (which may be related to the diminutive size in the representatives of these species). The new species can be recognised by the very short and thick male palpal tibia which is 2.2 times longer than wide (Fig. 6). In males of other Mediterranean congeners, including *F. teideensis*, the palpal tibia is considerably thinner and longer, not less than 3.0, but usually 4.5–7.0 longer than wide (*cf.* Wunderlich 1992: figs 130, 132, 136, 138; 1995: fig. 2; Marusik, Zonstein 2014: figs 15–19). Additionally, *F. pygmaea* sp.n. can be distinguished from similarly small-sized congeners from the Canary Islands by its relatively long embolus (which is considerably shorter in the Canary Islands species — see Wunderlich 1992: figs 130, 132, 135–138, 140). The structure of the vulva in *F. pygmaea* sp.n. is well-

distinguishable from that in all known Mediterranean species of *Filistata*, where configuration of the vulva has been figured (Figs 8–9). Unlike species with subdivided receptacles the new species lacks pore fields in mesal part of receptacle and this part is not globular like in *F. insidiatrix* (Figs 13–14) or *F. maguieri* (Figs 10–11).

DESCRIPTION. *Female* (holotype). Habitus as shown in Figs 1, 3–4. Body length 4.07. Colour in alcohol: prosoma and legs pale yellowish-orange with brownish hairs and spines; eye tubercle blackish-brown; abdomen uniformly pale brownish-orange. Carapace 1.42 long, 1.17 wide. Clypeus approximately two times as long as ALE diameter and gently constricted laterally. Eye tubercle relatively low (Fig. 5). Eye sizes and interdistances: AME 0.06, ALE 0.14, PLE 0.11, PME 0.07, AME-AME 0.03. Thoracic fovea represented as a nearly indistinct, very shallow groove. Labium *ca.* 0.8 times as wide as long. Sternal sigilla indistinct. Femur IV with 1 basodorsal spine. Ventral spines on metatarsi: I: 0–0–1; II: 1–1–3; III: 1–0–3; IV: 1–1–3. Tarsi III and IV with a few small ventral spines. Other



Figs. 4–14. Habitus and copulatory organs of *Filistata* spp.: *F. pygmaea* sp.n. (4–9), *F. maguirei* (10–11, paratype), *F. lehtineni* (12, paratype), *F. insidiatrix* (13–14, South Turkey).

4 — female habitus, dorsal; 5 — female prosoma, dorsal; 6 — male palp, prolateral; 7 — calamistrum of the female, lateral; 8–10, 12–13 — vulva, dorsal; 11, 14 — receptacle, dorsal. 4–5, 7–9 — holotype; 6 — paratype. Scale bar = 0.2 mm if not otherwise indicated.

Abbreviations: *Ep* — pore of receptacle's extension; *Lh* — long cymbial setae; *Re* — membranous extension of receptacle; *Rh* — head of receptacle.

Рис. 4–14. Габитус и копулятивные органы *Filistata* spp.: *F. pygmaea* sp.n. (4–9), *F. maguirei* (10–11, паратип), *F. lehtineni* (12, паратип), *F. insidiatrix* (13–14, южная Турция).

4 — габитус самки, сверху; 5 — головогрудь самки, сверху; 6 — пальпа самца, пролатерально; 7 — каламиструм, сбоку; 8–10, 12–13 — вульва, сверху; 11, 14 — рецептакула, сверху. 4–5, 7–9 — голотип; 6 — паратип. Масштаб 0,2 мм, если не указано иначе.

Сокращения: *Ep* — пора на выросте рецептакулы; *Lh* — длинные волоски цимбиума; *Re* — мембранизированный вырост рецептакулы; *Rh* — головка рецептакулы.

leg segments aspinose. Tarsi and metatarsi I–IV with 1–3 very short trichobothria (which are shorter than one third of the leg segment diameter).

Vulva as in Figs 8–9, with pair of receptacles. Each receptacle comprises a sclerotized oval-semicircular head (*Rh*) covered with numerous gland pores and a mesal membranous extension (*Re*) bearing only one pore (*Ep*). All pores with cilia.

Leg measurements ♂(♀): Palp: Fe 0.76(0.73), Pt 0.23(0.35), Ti 0.66(0.39), T 0.23(0.51), total 1.94(1.98); Leg I 6.66(5.21), II 5.08(3.64), III 4.01(2.81), IV 5.85(4.61); Fe I 1.84(1.38), II 1.32(1.07), III 1.04(0.86), IV 1.66(1.36), Pt I 0.56(0.57), II 0.57(0.50), III 0.54(0.42), IV 0.57(0.51); Ti I 1.77(1.18), II 1.54(0.77), III 0.88(0.56), IV 1.42(1.03); Mt I 1.48(1.29), II 1.03(0.72), III 0.90(0.53), IV 1.41(0.98); T I 1.01(0.79), II 0.62(0.58), III 0.65(0.44), IV 0.79(0.73).

Male (paratype). Habitus as shown in Figs 2–3. Body length 2.68. Colour in alcohol: as in female. Carapace 1.20 long, 0.94 wide. Eye sizes and interdistances: AME 0.07, ALE 0.11, PLE 0.09, PME 0.07, AME–AME 0.03. Thoracic fovea as in female. Fe IV with 1 basodorsal spine. Ventral spines on tibiae: I: 0–1–2; II: 1–2–3; III: 0–1–3; IV: 0–1–3. Ventral spines on metatarsi: I: 2–2–3; II: 2–2–1–3; III: 2–2–3; IV: 2–2–3. T IV with a few small ventral spines. Other leg segments aspinose. Trichobothria as in female. Palp as shown in Fig 6; femur longer than tibia; tibia slightly thicker than femur; cymbium cylindrical, with set of few long setae (*Lh*) on prolateral side; bulb conical, slightly longer than cymbium, with 3 coils of spermo-phor (in prolateral view); embolic part longer than tegular part, tip of embolus bent at a right angle.

HABITAT. The type series was found in a pile of stones near a country road between a pine forest and an open wasteland. Both spiders were found under the same stone on the ground.

DISTRIBUTION. Known only from the type locality.

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